Isom, Debra A (Debbi)

From: Huckaby, Alisa [AHUC461@ECY.WA.GOV]
Sent: Monday, May 14, 2001 2:02 PM
To: 'Debra_A_Debbi_Isom@RL.gov'
Cc: 'Glenn_Richardson@rl.gov'; 'Kevin_D_Leary@rl.gov'; 'Roger_W_Szelmeczka@RL.gov'; 'Jamie_G_Granger@rl.gov'; Jamison, Fred; Caggiano, Joseph; Huckaby, Alisa
Subject: FW: Target Parameters for Influent Aqueous Waste Analysis

Target Parameters for Influent...

Debbi,

Ecology hopes to modify the RCRA permit for the Liquid Effluent Retention Facility (LERF) within the next 15 months. DOE and Contractors provided information that I would like to have placed on the administrative record. During a monthly project management meeting, I took an action item to request the below information be placed on the administrative record in support of the upcoming permit modification. Would you please place these electronic mail messages and attached files on the LERF administrative record? If you have any questions or would like to discuss, please call me at 736-3034. In advance, thank you for your assistance.

Alisa Huckaby
Washington State Department of Ecology
509/736-3034
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FAX 736-3030

> -----Original Message-----
> From: Kevin_D_Leary@RL.gov [mailto:Kevin_D_Leary@RL.gov]
> Sent: Thursday, March 08, 2001 2:20 PM
> To: Conaway, Kathy; Jamison, Fred; Caggiano, Joseph; Huckaby, Alisa
> Subject: Target Parameters for Influent Aqueous Waste Analysis
>
> <<Target Parameters for Influent Aqueous Waste Analysis.doc>>
>
> Here is a list of target parameters for the LERF effluent per Alisa's
> request.
>
> Kevin D. Leary
> U.S. Dept. of Energy, Richland
> (509)-373-7285
> E-Mail: kevin_d_leary@rl.gov
>

Target Parameters for Influent Aqueous Waste Analysis	
VOLATILE ORGANIC COMPOUNDS	**SEMIVOLATILE ORGANIC COMPOUNDS**
Acetone	Acetophenone
Benzene	Benzyl alcohol
1-Butyl alcohol (1-Butanol)	2-Butoxyethanol
Carbon tetrachloride	Cresol (o, p, m)
Chlorobenzene	1,4-Dichlorobenzene
Chloroform	Dimethylnitrosamine
1,2-Dichloroethane (total)	(N-Nitrosodimethylamine)
1,1-Dichloroethylene	Di-n-octyl phthalate
2-Hexanone	Hexachloroethane
Methyl ethyl ketone (2-Butanone)	Naphthalene
Methyl isobutyl ketone (Hexone, 4-Methyl-2-pentanone)	Tributyl phosphate
2-Pentanone	
Tetrachloroethylene	
Tetrahydrofuran	
Toluene	
1,1,1-Trichloroethane	
1,1,2-Trichloroethane	
Trichloroethylene	
Vinyl chloride	
TOTAL METALS	**RADIONUCLIDES**
Aluminum	Gross alpha
Antimony	Gross beta
Arsenic	Americium-241
Barium	Antimony-125
Beryllium	Carbon-14
Cadmium	Cerium/Praseodymium-144
Calcium	Cesium-134
Chromium	Cesium-137
Copper	Cobalt-60
Iron	Curium-244
Lead	Europium-154
Magnesium	Europium-155
Manganese	Gamma
Mercury	Iodine-129
Nickel	Neptunium-237
Potassium	Niobium-94
Selenium	Plutonium-238
Silicon	Plutonium-239/240

Silver	Radium-226
Sodium	Ruthenium-103
Uranium	Ruthenium-106
Vanadium	Strontium-90
Zinc	Technicium-99
	Tin-113
	Tritium
	Zinc-65
ANIONS	**GENERAL CHEMISTRY PARAMETERS**
Bromide	Ammonia
Chloride	Total Kjeldahl nitrogen
Fluoride	Cyanide
Formate[1]	pH
Nitrate	Total suspended solids
Nitrite	Total dissolved solids
Phosphate	Total organic carbon
Sulfate	Specific conductivity

ANALYTICAL RATIONALE

The analytical data for the parameters including VOC, SVOC, metals, anions, general chemistry parameters, and radionuclides are used to define the physical and chemical properties of the aqueous waste to:

- Set operating conditions in the LERF and ETF
- Identify concentrations of some constituents which may also interfere with, or foul the ETF treatment process (e.g., fouling of the RO membranes)
- Evaluate LERF liner and piping material compatibility
- Determine treatability to evaluate if applicable constituents in the treated effluent will meet regulatory limits
- Estimate concentrations of some constituents in the secondary waste stream

Some analyses also are required to address special conditions or for other specific purposes as indicated below:

- Formate analysis is required for compliance with special conditions for process condensate.
- Total dissolved solids analysis to predict volume of powder waste from the secondary treatment train.

- Radionuclide analyses are used for inventorying radionuclides as necessary to demonstrate compliance with DOE Orders, radioactive air emissions, and waste discharge permit requirements.

Additional analyses may be preformed if information and process knowledge indicate that an influent aqueous waste contains constituents not included in the target list of parameters.